

**Statement of Work  
for  
Rebuild of the Circuit Card Assembly,  
Modulator/Demodulator  
NSN 5999-01-066-1352  
P/O AN/PRC-104**

**SOW-01-847-2-87307A-1/1**

**Prepared by  
Life Cycle Management Center, Code 847-2  
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STATEMENT OF WORK FOR THE  
Rebuild of the Circuit Card Assembly, Modulator/Demodulator  
5999-01-066-1352

1.0 Scope. This Statement of Work (SOW) establishes and sets forth tasks and identifies the work efforts that shall be performed by the Contractor (for purposes of this SOW, Contractor is defined as the commercial or government entity performing the rebuild in the rebuild effort of the Circuit Card Assembly Modulator/Demodulator (hereafter referred to as the Circuit Card Assembly.) These documents contain requirements to restore the Circuit Card Assembly to Condition Code "A". Condition Code A is defined as "serviceable/issuable without qualification, new, used, repaired or reconditioned materiel which is serviceable and issuable to all customers without limitation or restriction, including materiel with more than six months shelf-life remaining."

1.1 Background. Rebuild is defined as "That maintenance technique to restore an item to a standard as near as possible to original or new condition in appearance, performance, and life expectancy. This is accomplished through a maintenance technique or complete disassembly of the item, inspection of all parts or components, repair or replacement of worn or unserviceable elements using original manufacturing tolerances and/or specifications and subsequent reassembly of the items."

2.0 Applicable Documents. The following documents form a part of this SOW to the extent specified. Unless otherwise specified, the issues of these documents are those listed in the Department of Defense Index of Specifications and Standards (DoDISS) and supplement thereto which is in effect on the date of solicitation. In the event of conflict between the documents referenced herein and the contents of this SOW, the contents of this SOW shall be the superseding requirement.

2.1 Military Standards.

|                 |  |
|-----------------|--|
| MIL-STD-129     | DoD Standard Practice for Military Marking   |
| MIL-STD-2073-1D | DoD Standard Practice for Military Packaging |

2.2 Other Government Documents and Publications. The issues of those documents cited below shall be used.

|                    |                           |                   |
|--------------------|---------------------------|-------------------|
| TM 07748A-12/1     | Operator's Organizational | Jan 1979          |
| TO 31R2-2-PRC104-1 | Maintenance Instructions  | PCN 184 075255 00 |
|                    | AN/PRC-104                |                   |
| TM-07748A-45/3     | Maintenance Prints for    | Nov 1981          |
|                    | AN/PRC-104                | PCN 184 075259 00 |

|                                      |   |                                 |
|--------------------------------------|---|---------------------------------|
| SL-4-07748A<br>TO 31R2-2-PRC-104-4   | Repair Parts List for AN/PRC-104  | April 1979<br>PCN 124 077480 00 |
| RS 07748A-50/4<br>AN/PRC-104 w/Ch. 1 | Rebuild Standard for  | Jan 1979<br>PCN 170 070748 00   |
| TI-5820-25/22                        | Electromagnetic<br>Environmental Effects (E3)<br>Procedures for Communications<br>Electronics Equipment | PCN 168 047801 00               |
| DOD 4000.25-1-M                      | MILSTRIP Manual   |                                 |
| NAVICPINST 4491.2A                   | Requisitioning of Contractor<br>Furnished Materiel from the<br>Federal Supply System                    |                                 |

Military Handbooks (For Guidance)

|             |                          |
|-------------|--------------------------|
| MIL-HDBK-61 | Configuration Management |
|-------------|--------------------------|

2.3 Industry Standards

|                          |  |
|--------------------------|--|
| JESD625-A                | Requirements for Handling Electrostatic-Discharge-Sensitive (ESDS) Devices |
| ANSI/ISO/ASQC Q9003-1994 | Quality Systems-Model for Quality Assurance in Final Inspection and Test   |

Industry Standards (For Guidance)

|              |  |
|--------------|--|
| ANSI/EIA-649 | National Consensus Standard for Configuration Management |
|--------------|--|

Copies of military standards and specifications are available from the DOD Single Stock Point, Document Automation and Production Service, Building 4D, 700 Robbins Avenue, Philadelphia, PA 19111-5094, Telephone (215) 697- 2179 or DSN 442-2179, or <http://dodssp.daps.mil>.

Copies of other government publications required by contractors in connection with specific SOW requirements shall be obtained through the Contracting Officer: Commander, Attn: Contracting Officer (Code 891), Marine Corps Logistics Base, 814 Radford Blvd., Albany, GA 31704-1128, commercial telephone number (229) 639-6761 or DSN 567-6761. Copies of engineering drawings shall be obtained from: Life Cycle Management Center, Attn (Code 851-3), 814 Radford Blvd Suite 20320, Albany GA 31704-0320, commercial telephone number (229) 639-6410 or DSN 567-6410.

### 3.0 Requirements

3.1 General Tasks. In fulfilling the specified requirements, the Contractor shall:

a. Provide materials, labor, equipment, facilities and missing/repair parts, necessary to inspect, diagnose, restore, and test and calibrate the Circuit Card Assembly. Upon completion of rebuild, the subject item shall be Condition Code "A".

b. Conduct in-process and final on-site testing for witness by a Marine Corps (Code 847-2) authorized representative.

3.2 Detail Tasks. The following tasks describe the different phases for rebuild of the Circuit Card Assembly.

3.2.1 Phase I- Pre-induction. The Contractor shall perform a pre-induction inspection analysis for each Circuit Card Assembly using the Contractor Facility's diagnosis, inspection and testing techniques to determine extent of work and parts required. These findings shall be annotated on the Pre- Induction Checklist (Appendix A).

3.2.2 Phase II -Rebuild. After pre-induction tests and inspections have been completed, repair of the Circuit Card Assembly shall be accomplished by the Contractor in accordance with this SOW. Deficiencies noted on the Pre-Induction Checklist (Appendix A) during Phase I shall be repaired/replaced. Components or assemblies shall not be disassembled for replacement of parts unless that part has failed, or the component assembly wherein the part is located is disassembled for repair. Any Modification Instructions (MIs) or Engineering Change Proposals (ECPs) not previously applied shall be incorporated.

a. Hardware.

(1) Replace broken, unserviceable and/or missing hardware including nuts, bolts, screws, washers, turn lock fasteners, mandatory replacement items, safety, and one-time use items, etc. Unserviceable would include any of the above that failed to function properly.

(2) Ensure proper hardware locking devices are present on all moving mechanical assemblies.

(3) Hardware normally supplied with commercial parts shall be used unless specifically prohibited.

3.2.3 Phase III - Inspection, Testing and Acceptance.

a. The Contractor shall conduct inspection, testing and acceptance of the Circuit Card Assembly in accordance with TM 07748A-12/1, TM-07748A-45/3, SL-4-07748A, RS 07748A-50/4, and TI-5820-25/22.

b. The Contractor shall be responsible for conducting required tests and shall ensure all necessary personnel are notified prior to completion of the final acceptance. Acceptance tests shall be held at the contractor's facility. MCLB (Code 847-2), Albany, Georgia, representatives shall be given a minimum of two weeks notice prior to commencement of acceptance testing.

c. The Contractor shall be responsible for correcting any deficiencies identified during inspection/testing. MCLB (Code 847-2), Albany, Georgia, representatives may require the Contractor to repeat tests or portions thereof, if the original tests fail to demonstrate compliance with this SOW.

#### 3.2.4 Packaging, Handling, Storage and Transportation (PHS&T).

a. The Contractor shall be responsible for preservation and packaging of items being repaired under the terms of this statement of work. Items being prepared for long term storage or shipment to overseas destinations shall be in accordance with the level "A" requirements of MIL-STD-2073-1D, Appendix "A", Table A.VI., Electronic Equipment. Items being prepared for domestic shipment and immediate use shall be to level "B" requirements.

b. Marking shall be in accordance with MIL-STD-129.

c. The Marine Corps will provide the Contractor with the shipping address(es) for delivery of the repaired equipment. The Contractor shall be responsible for arranging for shipment to the pre-designated site(s). The Marine Corps will be responsible for transportation costs associated with shipping the equipment to and from the Contractor.

3.3 Government Furnished Equipment (GFE)/Government Furnished Materiel (GFM). GFE is government owned equipment authorized by contract for use by a Commercial/Government contractor. It is neither consumed during production nor incorporated into any product. GFM is materiel furnished to a contractor that will be consumed during the course of production or incorporated into product being manufactured/remanufactured under a contract/statement of work. In the event the Marine Corps does have GFE/GFM requirements the Management Control Activity (MCA/827-2), Marine Corps Logistics Bases, Albany, Georgia, will coordinate required GFE and will maintain a central control on Marine Corps assets in the Contractor's possession. The MCA will forward a GFE Accountability agreement to the Contractor Facility for signature to establish a chain of custody and property responsibilities for Marine Corps assets.

3.4 Configuration Control. The contractor shall apply configuration control procedures to establish configuration items. The contractor shall not implement configuration changes to an item's documented performance or design characteristics without prior written authorization. If it is necessary to temporarily depart from the authorized configuration, the contractor shall prepare and submit a Request for Deviation. MIL-HDBK-61 (paragraph 4.3 and Table 4-9) and ANSI/EIA-649 (paragraph 5.3.4) provide guidance for preparing this configuration control document.

3.5 Contractor Furnished Materiel. The Marine Corps has adopted the Navy's procedures regarding Contractor Furnished Materiel (NAVICPINST 4491.2A). In the event that Contractor Furnished Materiel is required for repair parts, the contractor shall requisition through the DOD Supply System. DOD 4000.25-1-M, (MILSTRIP) Chapter 11 authorizes contractors to requisition through the DOD Supply System.

3.6 Electrostatic Discharge (ESD) Control Program. The contractor shall establish, implement and document an ESD control program following the guidelines provided in JESD625-A. ESD protective measures shall be used during manufacturing, handling, inspection, test, marking, packaging, storing and transporting ESD sensitive components.

3.7 Electromagnetic Environmental Effects (E3) Procedures. The Contractor shall plan for and use proper (E3) control procedures in the Rebuild process.

3.8 Quality Assurance Provisions. The Contractor shall provide and maintain a Quality System that as a minimum, adheres to the requirements of ANSI/ISO/ASQC Q9003-1994, Quality System Model for Quality Assurance in Final Inspection and Test. The program shall ensure quality throughout all areas to include processing, assembly, inspection, test, maintenance, and preparation for delivery and shipping. Unless otherwise specified in the contract, the contractor shall be responsible for performance of all inspection requirements. The Government (Code 847-2) reserves the right to perform any of the inspections set forth in the contract where such inspections are deemed necessary to assure products and services conform to the prescribed requirements. The Contractor shall provide an Inspection and Test Plan that will ensure the Circuit Card Assembly will meet or exceed its original performance characteristics.

3.9 Acceptance. The performance of the Contractor and the quality of work delivered, including all equipment furnished and documentation written or compiled, shall be subject to in-process review and inspection during performance. Inspection may be accomplished in-plant or at any work site or location, and Marine Corps representatives (Code 847-2) shall be permitted to observe the work or to conduct an inspection. Final inspection and acceptance testing shall be conducted at the Contractor's Facility. Final acceptance shall be conducted on 100 percent of items to verify that the units meet all requirements.

3.10 Rejection. Failure to comply with any of the specified requirements listed herein shall be reason for rejection by MCLB (Code 847-2), Albany, representative. The Contractor shall, at no additional cost to MCLB, Albany, Georgia, correct the deficiencies and repeat the verification until an acceptable compliance with acceptance test procedures is demonstrated.

**Pre-Induction Checklist**

Circuit Card Assembly, Modulator/Demodulator

1. Using the following criteria, inspect the items listed below.
  - a. Inspect for dirt, dust, sand, etc.
  - b. Inspect for rust and/or corrosion damage.
  - c. Inspect for any physical damage. (cuts, dents, cracks, broken pins, etc.)
  - d. Ensure that all screws, washers, nuts, bolts, etc. are attached.
  - e. Inspect for dry rot on all rubber and plastic components.
  - f. Ensure that all covers and caps are attached.
  - g. Ensure that all knobs, switches and breakers operate freely and properly.

**S** - Serviceable**U** - Unserviceable**M** - Missing

Remarks:

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# CONTRACT DATA REQUIREMENTS LIST

(1 Data Item)

Form Approved

OMB No. 0704-0188

The public reporting burden for this collection of information is estimated to average 110 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0704-0188), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. Please DO NOT RETURN your form to the above address. Send completed form to the Government issuing Contracting Officer for the Contract/PR No. listed in Block E.

|                                  |                   |   |
|----------------------------------|-------------------|---|
| <b>A. CONTRACT LINE ITEM NO.</b> | <b>B. EXHIBIT</b> | <b>C. CATEGORY:</b><br>TOP _____ TM _____ OTHER <input checked="" type="checkbox"/> |
|----------------------------------|-------------------|---|



|  |                           |                      |
|--|---------------------------|----------------------|
| <b>D. SYSTEM/ITEM</b><br>Modulator/Demodulator CCA | <b>E. CONTRACT/PR NO.</b> | <b>F. CONTRACTOR</b> |
|--|---------------------------|----------------------|

|                                 |  |  |
|---------------------------------|--|--|
| <b>1. DATA ITEM NO.</b><br>A001 | <b>2. TITLE OF DATA ITEM</b><br>Inspection and Test Plan | <b>3. SUBTITLE</b><br>Quality Control/Assurance and Inspection |
|---------------------------------|--|--|

|  |   |   |
|--|---|---|
| <b>4. AUTHORITY (Data Acquisition Document No.)</b><br>DI-QCIC-81110 | <b>5. CONTRACT REFERENCE</b><br>SOW 3.8 | <b>6. REQUIRING OFFICE</b><br>MCLBA (847) |
|--|---|---|

|                            |  |                               |  |                         |                  |       |
|----------------------------|--|-------------------------------|--|-------------------------|------------------|-------|
| <b>7. DD 250 REQ</b><br>DD | <b>9. DIST STATEMENT REQUIRED</b><br>A | <b>10. FREQUENCY</b><br>ONE/R | <b>12. DATE OF FIRST SUBMISSION</b><br>See Blk 16      | <b>14. DISTRIBUTION</b> |                  |       |
| <b>8. APP CODE</b><br>A    |  | <b>11. AS OF DATE</b>         | <b>13. DATE OF SUBSEQUENT SUBMISSION</b><br>See Blk 16 | <b>a. ADDRESSEE</b>     | <b>b. COPIES</b> |       |
|                            |  |                               |  |                         | Draft            | Final |
|                            |  |                               |  |                         | Req              | Repro |

|   |                      |          |          |          |
|---|----------------------|----------|----------|----------|
| <b>16. REMARKS</b><br><br>Blk 4 - Contractor format is authorized.<br><br>Blk 12 - Submit plan within 30 days after contract award. MCLBA will provide acceptance/nonacceptance within 30 days after receipt.<br><br>Blk 13 - Submit within 30 days after receipt and incorporation of government comments. Review cycle shall be repeated until contractor receives acceptance from the government.<br><br>Distribution Statement A: Approved for public release, distribution is unlimited. | <b>MCLBA (847-2)</b> | <b>0</b> | <b>1</b> | <b>0</b> |
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|   | <b>15. TOTAL</b>     | <b>0</b> | <b>1</b> | <b>0</b> |

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| <b>G. PREPARED BY</b><br> | <b>H. DATE</b><br>001107 | <b>I. APPROVED BY</b><br> | <b>J. DATE</b><br>001107 |
|---|--------------------------|---|--------------------------|

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| <b>17. PRICE GROUP</b>           |
|                                  |
| <b>18. ESTIMATED TOTAL PRICE</b> |
|                                  |

(1 Data Item)

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[illegible]

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| 17. PRICE GROUP              |
| 18. ESTIMATED<br>TOTAL PRICE |

|  |                            |                                     |                          |
|--|----------------------------|-------------------------------------|--------------------------|
| G. PREPARED BY<br><i>Diane Collier</i> | H. DATE<br><i>7 Nov 00</i> | I. APPROVED BY<br><i>R. S. Egan</i> | J. DATE<br><i>001107</i> |
|--|----------------------------|-------------------------------------|--------------------------|